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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

10010658-1

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on 1/17/07

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Application Number

10/040,056

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12/31/01

First Named Inventor

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Art Unit

2628

Examiner

Rahmjoo, M.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

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applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

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NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

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*Total of _____ forms are submitted.

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REMARKS ACCOMPANYING PRE-APPEAL BRIEF REQUEST FOR REVIEW

In response to the Final Office Action dated October 17, 2006, Applicant respectfully requests a review of the final rejection in the above-identified application. Applicant respectfully submits that the Examiner's rejection of the Claims is improper as the rejection of Claims 16-23 does not satisfy the requirements of a *prima facie* case of obviousness as claim limitations are not met by the cited reference and there is no suggestion or motivation to combine the references. Claims 16-23 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,317,158 by Tice (hereinafter "Tice") in view of U.S. Patent 6,009,190 by Szeliski (hereinafter "Szeliski").

While only certain arguments are addressed in these Remarks, this should not be construed that Applicant agrees with the other arguments presented in the Final Office Action.

REJECTION DOES NOT SATISFY REQUIREMENTS OF A *PRIMA FACIE* CASE OF OBVIOUSNESS BECAUSE CLAIM LIMITATIONS ARE NOT MET BY THE CITED REFERENCES

Applicant respectfully submits that the combination of Tice and Szeliski does not teach, describe or suggest the embodiments recited in independent Claim 16. In particular, Applicant respectfully submits that Tice and the claimed embodiment is very different. Applicant understands Tice to teach a method and apparatus for positioning an input image into interlaced video. Tice teaches that intensity of each output pixel is determined as a function of subpixel position and two other input pixels. In particular, Tice does not teach, describe or suggest "for each sub-pixel, calculating an intensity value for said sub-pixel using only intensity information for a first color from said corresponding spatial region", (emphasis added) as claimed.

First, Applicant respectfully submits that Tice does not teach, describe or suggest "calculating an intensity value for said sub-pixel". Applicant understands Tice to teach the determination of intensity for a pixel. In particular, Tice discloses that "[t]he intensity, color and brightness of each pixel (P_{out}) in the output line is determined as a function of the subpixel position (SubPixelPosition) and two pixels (P_{in0} and P_{in1}) in the selected lines in the input image" (emphasis added; col. 3, lines 44-47). Furthermore, Equations 1a (col. 3, line 49) and 1b (col. 3, line 54) explicitly illustrate that each pixel is determined without determining the intensity of each sub-pixel of the pixel. In contrast, by teaching that the intensity of each pixel, and thus all sub-pixels of the

pixel, is determined collectively, Applicant respectfully submits that Tice teaches away from “calculating an intensity value for said sub-pixel” as claimed.

Second, Applicant respectfully submits that the Examiner has misquoted a citation from Tice, and that as such, mischaracterizes the teachings of Tice. Applicant notes the Examiner’s assertion that Tice at col. 3, line 30, recites “sub-pixel positioning an image, such as a title or other character information, matte, raster scan image or other static information” (emphasis placed by Examiner; see Office Action mailed October 17, 2006, page 2, last line, through page 3, line 1). Applicant respectfully submits that Tice does not include such a quotation. Rather, Tice clearly recites “unfiltered subpixel positioning will now be described. This technique vertically positions an image, such as a title or other character information, matte, raster scan image or other static information” (col. 3, lines 30-33). Applicant submits that it is difficult to respond to the Examiner’s argument based on reliance on a mischaracterization of Tice.

Third, Applicant respectfully submits that Tice does not teach, describe or suggest “calculating an intensity value for said sub-pixel using only intensity information for a first color from said corresponding spatial region”, (emphasis added) as claimed. Claim 16 also recites “wherein each sub-pixel of said display is mapped to a unique spatial region of said image” (emphasis added). In contrast, as recited above, Tice teaches determining intensity, color and brightness of a pixel based on subpixel position and two input pixels (col. 3, lines 44-47). Therefore, Tice does not teach “using only intensity information for a first color from said corresponding spatial region”, as claimed. Rather, by teaching that intensity of a pixel is determined based on sub-pixel position and two input pixels, Applicant respectfully submits that Tice teaches away from “calculating an intensity value for said sub-pixel using only intensity information for a first color from said corresponding spatial region”, (emphasis added) as claimed.

Fourth, Applicant respectfully notes the Examiner’s Response to Arguments, where the Examiner appears to assert that the Applicant’s arguments are inconsistent. Applicant respectfully notes that Tice teaches that intensity of a pixel is based on a subpixel position and two pixels in an output line. Applicant submits that Tice is silent to “for each sub-pixel, calculating an intensity value for said sub-pixel using only intensity information for a first color from said corresponding spatial region” as claimed.

Considering Szeliski, Applicant respectfully submits that the combination of Tice and Szeliski fails to teach or suggest this claim limitation because Szeliski does not overcome the shortcomings of Tice. Szeliski, alone or in combination with Tice, does not show or suggest “for

each sub-pixel, calculating an intensity value for said sub-pixel using only intensity information for a first color from said corresponding spatial region” as claimed. In particular, the Examiner has acknowledged that Szeliski does not provide such a teaching by indicating that the Remarks Accompanying Pre-Appeal Brief Request for Review filed by the Applicant on March 13, 2006, were persuasive (see Office Action mailed May 23, 2006, page 5, Response to Arguments).

Furthermore, Applicant respectfully submit that the combination of Tice in view of Szeliski fails to teach these limitations because Szeliski fails to remedy the shortcomings of Tice. In particular, the combination of Tice and Szeliski fails to teach or suggest the present invention as claimed because the combination of Tice and Szeliski does not satisfy the requirements of a *prima facie* case of obviousness.

REJECTION DOES NOT SATISFY REQUIREMENTS OF A *PRIMA FACIE* CASE OF
OBVIOUSNESS BECAUSE THERE IS NO SUGGESTION OR MOTIVATION TO
COMBINE THE REFERENCES IN THE MANNER PROPOSED BY THE EXAMINER

In order to establish a *prima facie* case of obviousness, the prior art must suggest the desirability of the claimed invention (MPEP 2142). In particular, “if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious” (emphasis added) (MPEP 2143.01; *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). Moreover, “[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed amendment” (emphasis added) (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

First, Applicant respectfully submits that there is no motivation to combine the teachings of Tice and Szeliski, because Szeliski teaches away from the claimed embodiments. As stated in the Remarks Accompanying Pre-Appeal Brief Request for Review filed by the Applicant on March 13, 2006, Applicant respectfully asserts that Szeliski does not teach, describe or suggest “calculating an intensity value for said sub-pixel” as claimed. In particular, Szeliski specifically teaches that a composited pixel intensity value is placed into a triangle. Moreover, the only teaching within Szeliski related to a sub-pixel is in reference to a local search of a local error surface.

Applicant respectfully asserts that there is no motivation or suggestion to combine these teachings. By teaching that a composited pixel intensity value is placed into a triangle, Applicant respectfully asserts that Szeliski teaches away from “for each sub-pixel, calculating an intensity value for said sub-pixel using only intensity information for a first color from said corresponding spatial region,” as claimed. Applicant respectfully notes that the Szeliski reference must be considered in its entirety in determining whether there is motivation or suggestion to combine Szeliski with Tice. Accordingly, the aforementioned limitations are not taught or suggested by Szeliski and thus an essential element needed for a prima facie rejection based on the cited references is not present.

Second, Applicant understands Tice to disclose a method and apparatus for positioning an input image into interlaced video. In particular, Tice specifically recites that “[t]he filtered input image then is positioned in the output image by mapping one line in the output image to one line in the filtered input image space” (emphasis added; col. 1, lines 58-60). Applicant respectfully submits that Tice teaches a one to one mapping of an input image to an output image. In particular, Tice teaches that the input image and the output image have the same spatial resolution.

Specifically, Applicant respectfully submit that the intended purpose and principle of operation of Tice is to provide a method and apparatus for positioning an input image to an output image of interlaced video using the same spatial resolution. Applicant understands Szeliski to teach operating on smaller image data structures to refine data (col. 13, lines 16-32). Examiner suggests that the method and apparatus of Tice be modified to include operating on smaller image data structures. However, as described above, Tice teaches a method and apparatus for positioning an input image to an output image of interlaced video using the same spatial resolution. With regard to modifying the system to for operation on smaller image data structures, such a modification would render Tice inoperable for its intended purpose.

Since Tice teaches that a method and apparatus for positioning an input image to an output image of interlaced video using the same spatial resolution, there is no motivation by Tice to modify the method and apparatus to be modified to operate on smaller image data structures having different spatial resolutions. In contrast, by teaching that the use of the same spatial resolution in positioning an input image to an output image, Applicant respectfully assert that Tice teaches away from the suggested combination with Szeliski.

In summary, Applicant respectfully submits that the Examiner’s rejections of the Claims are improper as the rejection of Claims 16-23 does not satisfy the requirements of a *prima facie*

case of obviousness as claim limitations are not met by the cited reference and there is no suggestion or motivation to combine the references. Accordingly, Applicant respectfully submits that the rejection of Claims 16-23 under 35 U.S.C. §103(a) is improper and should be reversed.